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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,825	03/04/2004	Takahiro Inoue	249945US2	3629
22850	7590	12/23/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			NGUYEN, LONG T	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,825

Applicant(s)

INOUE, TAKAHIRO

Examiner

Long Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 5-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because it is not clear why switch SWoff1 is floating (i.e., one terminal of switch SWoff1 is not being connected to the emitter of transistor 1). Further, there is no ground reference connected to switches SWoff1 and SWoff2 so it is not clear how the current can be discharged. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-9 are objected to because of the following informalities:

Claim 1, line 5, "a gate capacitance" should be changed to --a gate discharge current-- to provide antecedent basis for "the discharge current" (see line 11, claim 1).

Also, on line 11, “the discharge current” should be changed to --the gate discharge current-- for clarity due to the change above (on line 5 of claim 1) as suggested.

Claims 2-9 are objected to because they include the informalities of claim 1.

Claim 2, line 2, “circuit, further” should be changed to --circuit, wherein the semiconductor apparatus further--.

Also, in claim 2, line 5, after “turn-on operation”, it is suggested --for turning on said MOS-type device-- for clarity.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 4 are also rejected under 35 U.S.C. 102(e) as being anticipated by Klein et al. (USP 6,756,826).

Note that each of Figures 4 and 9 of the Ichikawa reference discloses a semiconductor apparatus, which includes: a MOS-type device (72); a first switch (56); a second switch (58); a third switch (64); a fourth switch (66); first timer means (52) for turning on the third switch (64) in conjunction with the turn-on of the first switch (56), and then turn off the third switch after a first predetermined time (because of the one-shot pulse generated from one-shot 52) from the turn-on of the third switch (64, Col. 4, lines 2-27); and second timer means (54) for turning on

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the fourth switch (66) in conjunction with the turn-on of the second switch (58), and then turning off the fourth switch (66) after a second predetermined time (because of the one-shot pulse generated from one-shot 64) from the turn-on of the fourth switch (Col. 4, lines 2-27). Also note that, it is seen that the first predetermined time is set at a value allowing the MOS-type device (72) to be turned on after the first and third switches (56 and 64) are turned on (when the first and third switches 56 and 64 are ON, then gate of transistor 72 is Hi and thus transistor 72 is ON), and the second predetermined time is set at a value allowing the MOS-type device (72) to be turned off after said second and fourth switches (58 and 66) are turned on (when the second and fourth switches 58 and 66 are ON, then gate of transistor 72 is Lo and thus transistor 72 is OFF).

Allowable Subject Matter

5. Claims 2,3 and 5-9 would be objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if amended to overcome the informalities set forth above.

Response to Arguments

6. Applicant's arguments filed 10/6/05 have been fully considered but they are not persuasive.

Applicant argues that Klein fails to teach a timer that is configured to turn on the third switch in conjunction with the first switch, and turn off the third switch after a first predetermined of time from the turn on of the third switch. However, this argument is not persuasive because Figure 5 of 6 of Klein shows a timer (52) for controlling the third switch (64)

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that is turn on in conjunction with the first switch (56), and turn off the third switch (64) after a first predetermined of time (after the pulse width of the one shot as shown in Figure 6). from the turn on of the third switch (64). Note that the one-shot provides a pulse signal having a pulse-width (i.e., while the output of one-shot having low logic), and when the output of one-shot 52 goes back to logic Hi then transistor 64 is turning off (i.e., and turn off the third switch after a first predetermined of time from the turn on of the third switch).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

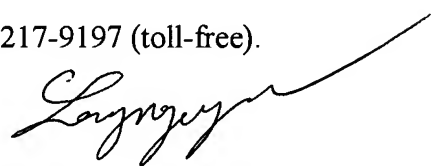
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Thursday from 8:00am to 6:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LONG NGUYEN
PRIMARY EXAMINER